

A Quantitative Study of Wage Workers in Iowa, 1894*

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THE WINTER 1964 ISSUE OF *Labor History* featured a study by Professor Thomas Mayer of the characteristics and attitudes of organized and unorganized wage workers in several states, based upon State Commissioners of Labor reports during the 1880s and 1890s.¹ He concluded that the only outstanding difference between union and nonunion workers was that the former had larger incomes. An unusually complete questionnaire distributed by the Commissioner of Labor Statistics for the State of Iowa in 1894 makes it possible to test some of Mayer's hypotheses about American labor in the late Nineteenth Century. This writer will raise questions that can be answered by an imaginative use of both "hard" and "soft" data.

The Sixth Biennial Report of the Bureau of Labor Statistics for the State of Iowa contains the replies of 4,122 wage workers to a questionnaire distributed by mail and in person to over 19,000 men and women in the state.² The respondents were fairly representative of nonagricultural employees in Iowa, although they were slightly younger and somewhat more likely to have been foreign born. The sample contains a high percentage of union members (19.1%), but this can be an advantage when comparisons between organized and unorganized labor are desired. Some kinds of railroad work-

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¹"Some Characteristics of Union Members in the 1880s and 1890s," *Labor History*, 5 (Winter 1964), 57-66.

²Des Moines, 1895.

ers and miners are under-represented and printers, who constitute 8.3% of the sample, are clearly over-represented, but in general the occupational structure of the state is accurately reflected in the data.³

In addition to occupation, the questionnaire asked over thirty questions on such topics as unemployment, apprenticeship, wages, trade unions, immigration, and home ownership. The length of the questionnaire may explain why the returns from the mailed inquiries were so scant. In the introduction to his report the Commissioner complains of the "impossibility to obtain any creditable or trustworthy statement of the condition of the working classes of the state by correspondence," and of the necessity of going "personally among the wage earners" to get their statements directly from them. Even then the railroad strike and the arrival of "General" C. T. Kelley's "Industrial Army" in April 1894, made workers suspicious of strangers. As the Commissioner laments:

Many have been the obstacles thrown in the way of your Commissioner, to obstruct or prevent the successful carrying out of his work; among which might be mentioned the refusal of the working people to answer the questions contained in the blanks, some claiming that it was simply a scheme of capitalists to secure a basis for further reduction of wages, others that it was an attempt to find out their business that they might be taxed more successfully, others that it was an attempt to ascertain their financial standing for the purpose of weakening their credit, others that it was a scheme of organized labor.⁴

Nevertheless, the 4,122 usable returns yield a considerable body of data for the purpose of comparing union and non-union workers in some of the larger industries.⁵

Taking all of the industries and occupations together (Table I), crosstabulation of the variable "union membership" with other important variables, including most of those

³*Census of Iowa for the year 1895* (Des Moines, 1896).

⁴*The Sixth Biennial Report of the Bureau of Labor Statistics for the State of Iowa*, 8.

⁵The variables were coded and key punched, one respondent to a card. The cards were then fed into an IBM 2780 card reader-printer and the data was copied onto tape. The tape is stored in the Regional Social Science Data Archive in Iowa City, a consortium of eleven eastern Iowa colleges, which uses a system 360, model 65, computer. A program called Statistical Package for the Social Sciences (SPSS) was used to generate crosstabulations, tables, and various statistics from the data.

used by Professor Mayer, revealed significant differences between union and nonunion workers for all the variables except preference for piece or time work, attitude toward immigration, and home liability.⁶ A union member in Iowa in 1894 was more likely to be native born, between the ages of twenty-one and forty, work fewer hours a day but earn and save more than his nonunion neighbor. He was more likely to think it was beneficial to belong to a union and to be paid by the piece rather than by time. On this last point, it is interesting to note that the majority of workers in two of the most organized crafts in this sample, printers and cigarmakers, preferred piece work, but other workers were less certain.⁷ A few years earlier a member of the machinists' union summed up the dilemma when he wrote: "The fact is, that some very good arguments can be presented upon both sides of this question, and whether a system of piece work or day work is the best, depends a great deal upon the nature of the work to be done, but much more upon how the matter is managed."⁸

Although the differences between union and nonunion workers in Iowa in 1894 appear more distinct than the differences Professor Mayer reports for Maine in 1887 and Illinois, Indiana, Pennsylvania, and New Jersey in 1889, it is difficult to draw any firm conclusions. There were, for instance, no significant differences between union and nonunion workers on some variables which are not included in the Tables, such as marital status and number of dependents.

It may be that the most important statistical difference, attitude toward labor unions, is skewed by the presence of so many young workers in the sample. As Table II shows, there is a high correlation between certain age groups and favorable attitudes toward unions. Of course, it is impossible to know which unions the respondents had in mind when they said they thought they were beneficial. One coal miner

⁶Using the Chi square test, a 5% level of significance is used throughout this paper.

⁷*The Sixth Biennial Report of Labor Statistics for the State of Iowa*, 184-185.

⁸*Journal of United Machinists and Mechanical Engineers of America*, I (February, 1889), 2.

Table I

Characteristics of organized and unorganized workers in Iowa, 1894 (adjusted for missing data)

	% union	number	% non- union	N
<i>Native born</i>	76.7	524	72.1	2076
<i>Age</i>				
under 21	5.9	40	15.9	458
21-30	43.4	294	34.1	979
31-40	32.1	217	25.1	721
41-50	14.0	95	15.2	434
51 and above	4.6	31	9.7	278
<i>Sex</i>				
Male	94.3	646	87.8	2541
Female	5.7	39	12.2	353
<i>Hours worked (summer)</i>				
less than ten	37.9	255	16.0	443
ten	50.4	339	72.0	2004
more than ten	11.7	79	12.0	235
<i>Weeks worked</i>				
less than 27	17.8	118	12.8	356
27-47	43.1	286	40.9	1131
48-52	39.1	259	46.3	1283
<i>Yearly earnings</i>				
less than \$300	32.3	213	48.3	1332
\$300 to \$600	29.1	192	29.0	799
more than \$600	38.6	254	22.7	627
<i>Savings last year</i>				
less than \$100	27.1	42	33.6	141
\$100 to \$200	32.3	50	36.0	258
more than \$200	40.6	63	30.4	218
<i>Paid by piece</i>	35.6	222	14.9	369
<i>Paid by time</i>	62.3	389	82.5	2037
<i>Prefer piece work</i>	50.0	223	42.3	528
<i>Prefer time work</i>	50.0	223	57.7	721

<i>Think union is beneficial</i>	95.7	628	58.5	1135
<i>Think immigration is injurious to trade or occupation</i>	48.7	278	48.9	1071
<i>Home owners</i>	50.1	187	61.4	961
<i>Home paid for</i>	48.7	91	47.3	449

SOURCE: *The Sixth Biennial Report of Labor Statistics for the State of Iowa.*

believed that "the Knights of Labor have done more for the laboring man than all the reform papers in the country, by educating him."⁹ Most respondents were probably thinking of American Federation of Labor affiliates or the railroad unions.

Tables III and IV compare union and nonunion workers in four occupational groups. The 160 respondents who identified themselves as cigarmakers, tobacco strippers, bunch makers, and workers in a tobacco factory represent 10% of the total number of persons employed in that industry in Iowa in 1894.¹⁰ The industry was well organized and a summary of strikes in Iowa between 1887 and 1894 indicates that cigarmakers were successful in seven of ten strikes.¹¹ The 343 printers in the sample also represent 10% of the number in the state. This category includes linotype operators and pressmen. Printers were the second most highly organized occupation in the sample (59.2%), just behind the locomotive engineers. Only 1½% of the state's carpenters are represented here and only 17.7% of these were union members, but they are one of the largest groups in the survey. Roughly 7% of the state's machinists and mechanics are represented in the sample.

There appears to be no significant difference between union and nonunion workers in the four crafts in regard to nativity. The variable concerning age indicates statistically

⁹*The Sixth Biennial Report of Labor Statistics for the State of Iowa*, 187.

¹⁰*Census of Iowa for the Year 1895*, 396-397.

¹¹*Tenth Annual Report of the Commissioner of Labor, 1894*: "Strikes and Lockouts," I (Washington, 1896), 290-301.

significant differences between union and nonunion members of the cigarmakers and the printers, but not carpenters and machinists. This may reflect different practices regarding the status of apprentices. In all four occupations the number of workers over fifty years old was too small to be important. Differences in hours worked were significant in the cases of the cigarmakers and the carpenters only. Of the cigarmakers in the sample, 84.1% reported an eight hour day during the summer.¹² All of the groups except the machinists show a significant difference between union and nonunion workers on the question of weeks worked during the year April 1,

Table II

Attitude toward labor unions by age groups in Iowa in 1894 (adjusted for missing data).

Age		11-20	21-30	31-40	41-50	51-60	61-70
<i>Beneficial</i>	%	81.8	74.1	66.6	58.5	42.3	49.2
	N	242	709	487	244	69	30
<i>Nonbeneficial</i>	%	18.2	25.9	33.4	41.5	57.7	50.8
	N	54	248	244	173	94	31

SOURCE: *The Sixth Biennial Report of Labor Statistics for the State of Iowa.*

1893 to April 1, 1894. Since there were no large strikes involving these workers during that period, it is not likely that strikes caused the union workers to lose more time than their unorganized fellow craftsmen. Vacation provisions may explain why some worked less than a full year, but employees who could afford to take more than a month off were rare. Part time employment in agriculture must also be taken into account and the entry of young workers into industry for the first time during the year. Unemployment from the unsettled economic conditions of 1893-94, is probably an important factor. Finally, the data suggests that union workers may have been more geographically mobile and thus lost some

¹²Grouping the responses into three categories of hours shows the pressure for the reduction of hours exerted by unions better than simply reporting the mean number of hours worked by each trade.

Table III

Characteristics of organized and unorganized workers in two industries in Iowa in 1894 (adjusted for missing data)

	Cigarmakers				Printers			
	union		nonunion		union		nonunion	
	%	N	%	N	%	N	%	N
<i>Native born</i>	63.8	44	78.9	60	91.6	174	90.1	118
<i>Age</i>								
under 21	5.8	4	44.2	34	6.4	12	37.4	49
21-30	42.0	29	28.6	22	52.9	99	32.8	43
31-40	43.5	30	20.8	16	26.7	50	18.3	24
41-50	5.8	4	5.2	4	10.7	20	6.9	9
<i>Hours worked (summer)</i>								
less than ten	91.3	63	53.3	40	31.9	60	18.6	24
ten	8.7	6	46.7	35	61.2	115	78.3	101
more than ten	0		0		6.9	13	3.2	4
<i>Weeks worked</i>								
less than 27	18.8	13	10.3	8	9.8	18	6.3	8
27-47	52.1	36	30.8	24	36.4	67	22.3	28
48-52	29.1	20	58.9	46	53.8	99	71.4	90

time between jobs. In two of the three trades in which there is significant difference between the number of weeks worked by union and nonunion workers there is also a significant difference in home ownership. Union printers and carpenters were less likely to be homeowners than nonunion workers. There may be other explanations for this, but the hypothesis that union workers were more mobile than nonunion workers deserves further testing.

Differences between union and nonunion workers' incomes were significant only for cigarmakers and printers, the two most highly organized crafts. Similarly, cigarmakers and printers showed a significant difference between union and nonunion workers in the system of payment.¹³ While most workers in these industries preferred piece work, only union members had significantly achieved that goal. Unorganized carpenters were more favorably disposed toward piece work than union carpenters, possibly because they had little faith in the beneficial effect of organization. Typical of the expressions of opposition to piece work is that of a machinist who said: "When a man works on piece work he does his best to make time, and the quality suffers. Very soon his employer thinks the men are making too much money, and then one reduction follows another until it gets below living prices." And a printer added: "The piece scale is fixed by what the faster men can make and hence is unfair to the average workman." Favorable response to the system of payment by the piece came from a machinist who said simply, "Piece work gives a man a chance to make more," and a cigarmaker who felt that an apprentice should make as much as a journeyman if he were as good a workman.¹⁴

As in Table I, the Chi square test shows a high correlation between union membership and a favorable attitude toward the union in each of the four trades. Even more interesting is the fact that a majority of unorganized workers in three of these occupations believed that unions were beneficial to wage earners generally. The greatest disagreement

¹³The missing percentages represent those respondents who answered "both" to the question: "Do you work by piece or on time?"

¹⁴*The Sixth Biennial Report of Labor Statistics for the State of Iowa*, 184-185.

over the efficacy of unionization was among the carpenters. If this produced any anxiety among union carpenters, it may be reflected in their significantly stronger opposition to immigration. Cigarmakers and machinists also expressed fears that immigration would be harmful to their trades, but the differences between union and nonunion workers were not significant at 5%. Nevertheless, the fact that a majority of union members in these important crafts had developed anti-immigrant sentiments by 1894, suggests that the rank and file was somewhat ahead of the union leaders on the issue of immigration restriction. As a blacksmith vividly phrased it:

Immigration has ruined this locality. The Bohemians predominate, and in the shops today they will get a job in preference to a white man. The system takes them into the shop from the yard and packing house and makes blacksmiths and machinists out of them as fast as they can learn. They are like the English sparrow, driving the native birds out of the country. The American mechanic has to go, too.¹⁵

One of the most important features of the 1894 data is the large (566) sample of working women. Table V gives a comparison of male and female wage workers. The large majority of the women respondents were under thirty and unmarried.¹⁶ Although they worked about the same number of hours, women received much lower wages than men. The American Federation of Labor had been officially encouraging the organization of women since 1888, and Eugene Debs' *Locomotive Firemen's Magazine* carried a women's department in each issue, edited by Ida Harper. With this support and faced with wage discrimination, women tended to think unions were beneficial. Frequently, however, organization and reform were presented in terms of the dominant ideal. "A shorter working day and a higher wage should be advo-

¹⁵*Ibid.*, 189. To test the hypothesis that immigrant workers were more class conscious, the data on the question "Where did you learn your trade?" was crosstabulated with the answers to the question "Do you regard labor organizations as beneficial to wage earners generally?" The expectation that workers who had learned a trade in Europe would be more favorably disposed toward unions was confirmed. 77.8% of the foreign trained workers thought unions beneficial, while 68.3% of the American trained workers agreed.

¹⁶The author acknowledges the work of his students, Barbara Steinson and Steven J. Siegel, on this part of the study.

Table IV
*Characteristics of organized and unorganized workers in
 two crafts in Iowa in 1894 (adjusted for missing data)*

	Carpenters			Machinists			
	union %	union N	nonunion N	union %	union N	nonunion %	nonunion N
<i>Native born</i>	62.5	25	132	72.1	31	71.0	66
<i>Age</i>							
under 21	0		3	4.9	2	10.8	10
21-30	17.5	7	34	58.5	24	33.3	31
31-40	50.0	20	59	12.2	5	31.2	29
41-50	22.5	9	52	17.1	7	16.1	15
<i>Hours worked (summer)</i>							
less than ten	42.5	17	21	48.8	21	40.0	36
ten	57.5	23	155	51.2	22	60.0	54
more than ten	0		7	0		0	
<i>Weeks worked</i>							
less than 27	13.5	5	31	21.4	9	8.8	8
27-47	83.8	31	102	33.4	14	33.0	30
48-52	2.7	1	51	45.2	19	58.2	53

Yearly earnings less than \$300	32.4	12	28.5	52	21.4	9	27.5	25
\$300-\$600	56.8	21	40.2	73	28.6	12	33.0	30
more than \$600	10.8	4	31.3	57	50.0	21	39.5	36
Paid by piece	10.8	4	9.9	15	0		3.4	3
Paid by time	89.2	33	78.1	118	100.0	42	95.5	85
Prefer piece work	8.7	2	39.1	34	3.1	1	9.6	5
Think union is beneficial	97.5	39	39.7	54	93.0	40	57.7	41
Think immigration is injurious to trade or occupation	82.9	29	56.0	93	76.3	29	61.5	48
Home owners	52.8	19	80.1	117	47.8	11	57.7	30

SOURCE: *The Sixth Biennial Report of Labor Statistics for the State of Iowa.*

Table V

Characteristics of male and female wage workers
in Iowa in 1894 (adjusted for missing data)

	% women	N	% men	N
Hours worked (summer)				
less than ten	28.0	152	18.6	637
ten	62.2	337	69.3	2373
more than ten	9.8	53	12.1	414
Yearly earnings				
less than \$300	88.6	464	41.9	1412
\$300-\$600	8.4	44	30.5	1034
more than \$600	3.1	16	27.6	939
Paid by piece	39.7	204	15.7	466
Paid by time	59.7	307	81.6	2416
Prefer piece work	58.0	160	41.7	637
Belong to a union	9.9	39	20.3	646
Think union is beneficial	72.4	147	67.7	1655
Think immigration is injurious to trade or occupation	28.7	71	50.7	1353

SOURCE: *The Sixth Biennial Report of Labor Statistics for the State of Iowa.*

cated, and all types of organizations working for industrial betterment should cooperate in the effort to make America's wage-earning women fit daughters of the country's noblest traditions and fit mothers of her future sons."¹⁷

In conclusion, my data suggests somewhat greater differences between union and nonunion workers than Professor Mayer's. This is not to say that Iowa wage workers in 1894

¹⁷Annie Marion MacLean, *Wage-Earning Women* (New York, 1910), 178. For a summary of the efforts to organize women see, Philip Foner, *History of the Labor Movement in the United States*, II (New York, 1955), 189-195.

were especially radical or class conscious, only that they were distinctly "union" conscious and that the benefits of organization were obvious to young men and women entering the labor market in the troubled years of 1893-94. It also seems clear that the differences between young and old and male and female workers were more important than the differences between those who were union members and those who were not. Clearly it would be profitable to examine other state labor reports, since they may contain data unavailable in U. S. Department of Commerce and Labor Reports or the Censuses.

Notes On Contributors

Wayne E. Fuller was born and raised on a farm at Henderson, Colorado. He received a B.A. degree from the University of Colorado, a M.A. from the University of Denver and a Ph.D. degree from the University of California at Berkeley. From 1942 to 1948 he served in the armed forces, was wounded in Normandy, and was retired from the Army as a Captain. From 1954 to 1955 he was Director of the Rock County Historical Society in Janesville, Wisconsin, and from 1955 to the present he has taught at the University of Texas at El Paso where he is now chairman of the Department of History.

Professor Fuller is the author of *R.F.D.: The Changing Face of Rural America* and of several articles relating to rural America. His book, *The American Mail: Enlarger of the Common Life* will be published in the fall of 1972 by the Chicago University Press as a part of the Chicago History of American Civilization series edited by Daniel Boorstin.

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